



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

## RECENT LITERATURE.

**Some Recent Zoological Text-books.**—In the last few years German zoologists have produced a considerable number of hand-books, manuals and compendiums of zoology and its various subdivisions, the majority of which have been issued from a single publishing house, that of Fischer of Jena. The first requiring mention is the zoology<sup>1</sup> by Boas of Copenhagen. This is in reality a second edition of the Danish work of 1888, and the author acknowledges the assistance received from Prof. Spengel in making the translation. It differs from the original in many respects, the most noticeable being an added section, entitled "Biologie." The work is divided into two portions, general and special, occupying respectively 90 and 475 pages. In the first occur those general statements regarding cells, tissues and organs, the relation of animals to their environment, and the outlines of the theory of evolution; which are deemed indispensable in the ordinary text-book. In the special portion the various groups of the animal kingdom are discussed. As must occur in a work by a single author there is considerable inequality in the treatment, while a rather reprehensible practice (not however confined to Dr. Boas) of treating certain groups as appendages (Anhangen) of others result in some rather queer associations. To show the scope and views of the author, an outline of the classification followed is here given. 1, Protozoa; 2, Coelenterates, with the sponges as an anhang; 3, Echinodermata; 4, Plathelminthes (including Nemertines) with the Rotifers as an anhang; 5, Nemathelminthes; 6, Annelida, with the Gephyræa as an anhang to the Chætopods and separating them from the Hirudinei, and with Polyzoa and Brachiopods as an anhang to the whole group; 7, Arthropoda divided into Crustacea, Myriapods, Insecta and Arachnids; Limulus being inserted between Cladocera and Ostracoda, the Stomatopoda following the Decapods; and Peripatus serving as an anhang to the Myriapods; 8, Mollusca, arranged as follows: Chitons, Gastropoda, Acephala, and Cephalopoda, the Pteropoda being closely associated with the Opisthobranchs; 9, Vertebrata, divided into Leptocardii, Pisces, Amphibia, Reptilia, Aves, and Mammals, while the Tunicata occupy the last four pages of the volume of the work, as an appendix to the Vertebrates. The work of Boas, as a

<sup>1</sup>Lehrbuch der Zoologie für Studierende und Lehrer, Dr. J. E. V. Boas, Jena, 1890, pp. 578.

whole seems well adapted to replace the well-known "Lehrbuch" of Claus. It is possibly not so satisfactory in its treatment of the invertebrates, but in the vertebrates, as one would expect from Dr. Boas' reputation, it far surpasses the latter. Its smaller size is distinctly a recommendation in its favor. The illustrations, 378 in number, are largely diagrammatic, but are not very artistic.

The fifth edition of Claus's *Lehrbuch*<sup>2</sup> has been subjected to only a very cursory examination. The additions (92 pages and 77 cuts) are considerable but they seem to be mostly of minor importance, while the many glaring faults of the previous edition are left unaltered. Possibly a more thorough examination would show that the improvements were commensurate with the increase in size.

It is greatly to be regretted that the zoology of Hatschek<sup>3</sup> show but slight chance of completion, for while the work is scarcely adapted for the students of the grade of those in our colleges, it is certainly so far as it goes, most suggestive to the more advanced morphologist. That very wealth of theory, which spoils the work for the beginner, opens up new vistas to his instructor. Yet, if it never be completed, it will long have its value for the student, just as has the still uncompleted vertebrate volume of the *Handbuch der Zootomie* of Stannius. An analysis of the work is next to impossible in its uncompleted condition.

One familiar with Schmidt's small *Comparative Anatomy* would never recognize it in Lang's new edition,<sup>4</sup> in which, to our minds all reference to the previous editions should be omitted. The two parts which have already appeared discuss those groups which are usually included under Protozoa, Coelenterates, Worms, and Arthropods; and here as in Hatschek's work, the subject is allowed to logically develop itself, there being no distinction between general and special portions. Thus in Lang's work there are first a few words upon the cell and then the account of the unicellular animals, the tissues and organs of the many-celled forms being described and elucidated later as the occasion demands. Between Hatschek's and Lang's works there are

<sup>2</sup>C. Claus. *Lehrbuch der Zoologie*. 5 Aufl. Marburg, 1890, pp. xii, 958, xx.

<sup>3</sup>*Lehrbuch der Zoologie, eine morphologische Übersicht des Thierreiches zur Einführung in das Studium dieser Wissenschaft* von Dr. Berthold Hatschek. Erste bis dritte Lieferungen Jena, 1888-1891, pp. iv, 432.

<sup>4</sup>*Lehrbuch der vergleichenden Anatomie zum Gebrauche bei vergleichend anatomischen und zoologischen Vorlesungen* von Dr. Arnold Lang. Neunte gänzlich umgearbeitete Auflage von Edward Oscar Schmidt's *Handbuch der vergleichenden Anatomie*. Erste und zweite Abtheilungen. Jena, 1888-1890, pp. iv-566.

many contrasts. Where Hatschek is brilliant, Lang is conservative; Hatschek gives generalizations; Lang offers a mine of detail; Hatschek has many novelties in classification; Lang follows rather the beaten track. In short Lang's work stands to-day the most useful compendium of invertebrate anatomy in existence. When the other portions are finished (which we learn from the author will be in about two years) the whole will take a front rank among the textbooks of the world.

Another work of somewhat different scope which deserves praise as high as Lang's *Anatomie*, is the *Comparative Embryology of the Invertebrates*<sup>5</sup> of Korschelt and Heider, of which two parts have already appeared. In opening a work of this character one naturally compares it with the classic work of Balfour, issued ten years ago. Until the whole work is completed a satisfactory comparison cannot be made, for while Balfour scattered many of his generalizations through the accounts of the different groups, the young Berliners reserve more for the special portion which has yet to appear. It is interesting to compare the size of the two volumes in some detail as follows, keeping in mind the fact that the page of Korschelt and Heider contains about 25 per cent more than that of Balfour.

	Balfour.	Korschelt & Heider.
Sponges.....	12 pages.	18 pages.
Cœlenterates.....	31 “	84 “
Annelids.....	38 “	65 “
Other “worms”.....	47 “	80 “
Enteropneusti.....	4 “	11 “
Echinoderms.....	31 “	50 “
Arthropoda.....	137 “	600 “

This conveys some idea of the amount of literature which has been boiled down into these two parts, for they must be regarded rather as compilations than as philosophical works; the philosophy is to come later. We learn that the concluding part will include the Molluscs, the Tunicates, Balanoglossus and Amphioxus, in other words all that are not in the strictest sense vertebrates; as well as the general portion, and that a year or two more must elapse before the whole is completed. Thus it, together with the somewhat older *Lehrbuch der Entwick-*

<sup>5</sup>*Lehrbuch der vergleichenden Entwicklungsgeschichte der wirbellosen Thiere* von Dr. E. Korschelt and Dr. K. Heider. Specieller Theil. Erstes und zweites heften. Jena, 1890-91, pp. xii-908.

lungsgeschichte of Oscar Hertwig, will form a compendious account of Embryology as it is understood to-day.

Last in our series comes the *Zoology*<sup>6</sup> of Richard Hertwig, of which the second and concluding portion is promised immediately. From the reputation of the author and from the compact size of the volume we had hoped for much in this work, but to us it seems far less satisfactory than any of the other works enumerated. All of the others bear abundant evidence of careful preparation but this shows on every page haste and carelessness. This shows itself not only in matter but in typographic arrangement. Thus the chapter on the Development of Systematic Zoology is made of equal rank to the section headed "History of Zoology." On the textual side adverse criticism is easy. Thus the account of the theory of evolution, though nearly thirty pages in length, contains no mention of the post Darwinian labors. Ten pages are devoted to the cell and cell division but no mention is made of the part played by the centrosome. The account of coral formation (p. 210) is unintelligible and misleading. The Narcomedusæ are ignored. A lack of proportion is everywhere noticeable. Thus the Protozoa have 33 pages accorded them, while the Annelids have but 12. These are but samples. The book, on the other hand has its good features. We have been pleased with the concluding portions of each section, entitled "Zusammenfassung der Resultate," where in categorical form the author has brought together in condensed shape the most important facts regarding the group, and which might almost be used for a syllabus of lectures.

The text-books which have been mentioned are all in German, but two of them are announced for English translation—Korschelt and Heider's Embryology and that of Oscar Hertwig, while a portion of Lang's Anatomy has already been issued. With this German zoological vitality the English language offers nothing in comparison. No text-book has been issued from England or America in the last five years and the long advertised zoology by an English zoologist will hardly appear for five years to come. But Germany still puts out new books and new editions. In the early future we are promised a new Comparative Anatomy by Gegenbaur, new editions of both the "Lehrbuch" and the "Grundriss" of Comparative Anatomy by Wiedersheim, while Prof. Lang of Zürich is contemplating an abridgement of his Comparative Anatomy as soon as the larger work is complete. The proposed edition of Balfour's Comparative Embry-

<sup>6</sup>Lehrbuch der Zoologie von Dr. Richard Hertwig, Erste Theil. Jena, 1891, pp. 320.

ology revised to date is abandoned for the present, while a new work on the Embryology of the Vertebrates, by Dr. C. S. Minot will appear at an early date.—J. S. KINGSLEY.

Stanislas Meunier's<sup>1</sup> "**Les Methodes de Synthèse eu Minéralogie**" is a monumental work worthy alike of the author who wrote it and of the subject of which it treats. Nearly all books on the artificial production of minerals that have heretofore appeared have been simply lists of products obtained in the laboratory, classified under the titles of the natural products with which they are identical. In the present volume a notable improvement has been made in the method of presenting that most fascinating of all mineralogical problems—the manufacture of minerals and the bearing of the processes involved therein upon the great geological questions relating to metamorphism, the production of mineral veins and the formation of ores. Instead of briefly mentioning the different methods by which the several minerals have been obtained, the author discusses the methods themselves, and illustrates them by citing the many products which each yields. He then points out the manner in which the processes throw light on the origin of mineral names in the earth's crust, and shows the relations existing between them. The study of chemical geology must receive a new impetus if the volume before us is made of as much use as it deserves to be. Geologists will thank the author for the suggestive hints that are so abundant throughout his book; mineralogists will welcome the appearance of a volume that so clearly describes the processes by which so many interesting minerals have been manufactured; chemists, if they will only think so, may find given in the treatise many reactions that will help to clear up the difficult problem of the constitution of inorganic compounds, and so will join with the mineralogists and the geologists in according the work a hearty reception.

The historical method of development of the subject is followed in most instances. After classifying the methods that have been employed by the many workers in this field, Meunier begins by giving a very detailed account of the different processes as they were first used, and then mentions their modifications, in each case referring briefly, or at length, as occasion demands, to the minerals yielded by each. Before taking up the subject proper of the work, the author describes the conditions under which minerals are being formed at

<sup>1</sup>Paris, Baudry et Cie, 1891, pp. xii and 359.